

AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning on page 1, line 22, as follows:

-- Typically, the stroke of power feed drilling equipment is adjusted for the maximum material thickness in the area drilled. This results in excessive cycle time drilling holes through the thinner materials in that area. In addition, to accommodate material thicknesses that vary to a greater degree, production frequently has to set-up multiple pieces of power feed drilling equipment that are identical except for stroke adjustment. This situation results in the need for additional power feed drill motors and additional time to set-up and control those drill motors. Thus, a need exists to reduce the to waste and inefficiency associated with such fixed-stroke drilling apparatus. --

Please amend the paragraph beginning on page 2, line 13, as follows:

-- In one embodiment, a thrust sensing valve assembly includes a housing including an input port and an output port and further having a mounting portion adapted to be coupled to a manufacturing tool. A supply member is operatively coupled to the housing to provide a flow of a ~~the~~ pressurized medium into the input port of the housing. Finally, an elongated body is operatively coupled to the housing and moveable along an axis between a first position corresponding to a first pressure output from the housing and a second position corresponding to a second pressure output from the housing. The elongated body is biased into the first position and moveable into the second position in the presence of a thrust force on the mounting portion.

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Please amend the paragraph beginning on page 3, line 28, as follows:

-- FIGURE 1 is side elevational view of a drill assembly 100 having a thrust-sensing valve 110 (partially shown) in accordance with an embodiment of the present invention. In this embodiment, the drill assembly 100 also includes a drive motor 102 coupled to a drill chuck 104. A drill bit 106 is coupled to the drill chuck 104. As described more fully below, the drilling assembly 110 +100 equipped with the thrust-sensing valve 100 may advantageously sense when a hole has been completely drilled through a workpiece, and will automatically retract the drill bit to its starting position. --

Please amend the paragraph beginning on page 6, line 7, as follows:

-- It will be appreciated that a variety of embodiments of control valves 510 and drive units 520 may be conceived, and that the invention is not limited to the particular embodiment described above and shown in FIGURE 5. For example, in one particular embodiment, the control valve 510 may be a 4-way pneumatic valve used in conjunction with the thrust sensing valve 110 to operate an internal spool valve that controls a drill and retract cycle of a power feed drill motor, such as the PAR-A-MATIC® series of pneumatic self-feed drill motors type commercially available from Ingersoll-Rand Fluid Products of Bryan, Ohio Par A Matie. In this embodiment, the spool valve shifts to the feed and retract positions as air is exhausted on each side of the valve. Exhaust ports of the spool valve may be coupled to the 4-way control valve such that when the 4-way control valve is manually shifted to an advance position *A* by an operator, air (or other pressurized medium) is exhausted from a “feed” side of the spool valve and the drill motor advances. At this time, a metered air supply is being sent to the thrust sensing valve 110. The thrust sensing valve 110 air supply line 113 may also be connected to an air pilot on the 4-way valve so that when the drill starts to penetrate the material closing the thrust sensing valve 110, a back pressure is built up causing the 4-way valve to [[t]] shift back to its original position *B*. In position *B*, the “retract” side of the spool valve is connected to the thrust sensing valve 110. When the drill bit (or other tool) 106 exits the back side of the

workpiece, opening the thrust sensing valve 110, the air is exhausted from the “retract” side of the spool valve causing the drill motor to retract. --

Please amend the paragraph beginning on page 7, line 15, as follows:

-- FIGURE 8 shows the 4-way valve assembly 600 of FIGURE 6 in a third operating condition 614. As the drill bit 106 contacts the workpiece 502 (FIGURE 5), the thrust valve assembly 110 moves to an open position. Air pressure at a second air pilot 14 is now greater than an air pressure at a first air pilot 12, causing the 4-way valve assembly 600 to shift to the third operating condition 614. As shown in FIGURE 8, in the third operating condition 614, air exhausts out ~~out~~ of both the drill and the retract ports 609, 608 of the drill motor 604. The drill motor 604 remains in the drill or advance position, and continues to advance the drill bit 106 into the workpiece 502 (FIGURE 5). --